



## DEPARTMENT OF COMPUTER & INFORMATION SCIENCE & ENGINEERING

**CEN 5728 – FALL 2021**  
**USER EXPERIENCE DESIGN**  
AND 0034  
Tuesday 10.40 am – 11.30 am  
Thursday 10.40 am – 12.35 pm

Please add the course code in the subject line  
of emails sent to the instructor to ensure  
receipt of your emails,  
e.g., “CEN5728 UXD: Email topic”

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### Instruction Information:

*Instructor:* Sharon Lynn Chu, Ph.D

- *Office:* CSE building, E422
- *Office Hours:* Email me to set up
- *Email:* [slchu@ufl.edu](mailto:slchu@ufl.edu)
- *Personal website:* <https://cise.ufl.edu/~slchu/>
- *Lab website:* <http://elxlab.cise.ufl.edu/>

*Teaching Assistant:* TBC

- *Office:*
- *Office Hours:*
- *Email:*

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### Course Information:

#### Prerequisites:

None

#### Course Description:

*Catalog description.* Introduces methods and tools used in User Experience Design (UXD): the early stages of software design focused on meeting user needs. Key concepts include user research, contextual design, design thinking, ideation, iterative design, prototyping, and design documentation. Projects utilize software tools used in the industry. Credits: 3.

*Notes.* No prior design experience is necessary for this class. This course will require students to work on a final group project designing for an industry client who will define project needs and requirements. Developers with experience in UX/UI design methods are in high demand in today’s software industry, and the projects students work on in this course will strengthen their portfolio. This is the graduate version of the UXD course.

#### Course Objectives:

By the end of this course, students should be able to:

- Define the term “*user experience design*” and identify how it fits into the software development lifecycle.
- Understand key concepts in interaction design
- Critically analyze technologies in terms of the concepts of interaction design
- Conduct *exploratory* user experience design activities to understand a design space when designing a new user interaction.

- Conduct *generative* user experience design activities to creatively fill user needs when designing a new user interaction.
- Conduct *refining* user experience design activities to select and iteratively improve a design concept for a new user interaction.
- Participate effectively in *design critiques*, and be able to use this experience to be a more effective design team member.
- Design and produce an *interactive prototype* of a complete design concept to present to a client for a new user interaction.

### Materials and Supply Fees:

A fee is charged for the course for materials provided to students for class activities.

### Class Format and Components:

*Important note about class format.* This class will be unlike most other classes you have taken, especially in computer science. This is not your usual “lecture, study, exam” class. A large portion of this course will depend on you engaging in hands-on activities and discussions. This is because learning-by-doing is the best way to understand design and its process. This means that you will have to take responsibility for your own learning and skill building. It is up to you to plan ahead, read ahead, and keep on top of the course material and project methods we cover. Use your curiosity, dig deeper, challenge yourself, have fun, and develop and use the learning style that fits you best.

*Class sessions.* The class will meet two times per week in one 45 mins session and one 1 hr 45 mins session.

*Course components.* This course involves the following components:

- **Readings** – Read assigned papers, book chapters or online resources
- **In-class participation** – Contribute in class in discussions and activities
- **Lectures** – Attend class lectures
- **Homework assignments** – Submit short assignments
- **Tests** – Take an end-of-semester test
- **Projects** – Project 1, Project 2 (with industry clients)

## Course Materials:

### Textbooks

No textbook is required for this course. Weekly readings in the form of textbook chapters and online resources will be posted to the course website up to three weeks prior to the due date. Students will be responsible for accessing the readings and downloading any relevant links provided.

Many readings for the course will be taken from the following books. Students may choose to purchase their own copy of one or more of these textbooks to read beyond the scope of the course. This may be especially useful for students considering UX/UI careers, which make heavy use of UXD methods and concepts.

- *Interaction Design: Beyond Human-Computer Interaction*, by Rogers, Sharp, and Preece, John Wiley & Sons. ISBN-10 # 0470665769
- *The Design of Everyday Things*, by Norman, ISBN-10 # 0465050654
- *The UX book: process and guidelines for ensuring a quality user experience*, by Hartson, R., & Pyla, P. S. Elsevier.

Other useful books:

- *Sketching User Experiences: Getting the Design Right and the Right Design*, by Buxton, ISBN-10 # 0123740371
- *Sketching User Experiences: The Workbook*, by Greenberg, Carpendale, Marquardt, and Buxton, ISBN-10 # 0123819598
- *Designing for Small Screens: Mobile Phones, Smart Phones, PDAs, Pocket PCs, Navigation Systems, MP3 Players, Game Consoles*, by Studio 7.5, Zwick, and Schmitz, ISBN-10 # 2940373078

## Software

Students are required to bring a laptop to class to participate in both the in-class activities and project working sessions. Students may need to install free or trial versions of software on their laptops or use software via online services over the course of the semester to successfully complete the course. Students will be free to choose what software to use to complete their assignments. Examples of software that may be used throughout the course are:

- InVision App, by InVision (<http://www.invisionapp.com/>)
  - Axure RP Pro, by Axure Software Solutions (<http://www.axure.com/>)
  - Balsamiq, by Balsamiq Studios (<http://balsamiq.com/>)
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## Course Grading:

### Course Grades:

Students' performance in the course will be determined based as below. All work will be graded out of 100.

• End-of-semester test	[20%]
• Homework assignments	[10%]
• Projects	[70%]
- Project 1 (20%)	
- Project 2 (with industry clients) (50%)	

### Grading Scale:

Scale for overall course grade:

- |                    |                    |
|--------------------|--------------------|
| • 100 – 93.6 : A   | • 80.5 – 77.6 : C+ |
| • 93.5 – 90.6 : A- | • 77.5 – 73.6 : C  |
| • 90.5 – 87.6 : B+ | • 73.5 – 70.6 : C- |
| • 87.5 – 83.6 : B  | • 70.5 – 67.6 : D+ |
| • 83.5 – 80.6 : B- | • 67.5 – 63.6 : D  |
|                    | • 63.5 – 60.6 : D- |
|                    | • 60.5 – 0 : E     |

All final course grades will be rounded to the nearest whole number. Canvas estimates of final course grades are not to be considered accurate until they are officially announced by the instructor. The Canvas system has a “What If” tool if you want to do your own math to verify final grades.

This course will use the Canvas e-Learning course management system to post grades and to communicate with class members. If you have a question about the course that other students could benefit from hearing the answer, please post to the appropriate discussion thread on Canvas rather than sending individual emails to the instructor/TA.

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### Class Attendance:

Students are expected to attend all classes. If a student misses a session and is unable to provide the documentation required for an excused absence, the student will need to consult with other members of the class to determine what was missed and to request guidance from the instructor regarding missed content. There is no provision for making up missed class participation credit for an unexcused absence.

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## Course Policies:

### ***University Honesty Policy***

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### ***Students Requiring Accommodations***

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### **Course Evaluation**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### **Software Use**

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

### **In-Class Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

## **Commitment to a Safe and Inclusive Learning Environment**

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, [jpennacc@ufl.edu](mailto:jpennacc@ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)

## **Student Privacy**

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

## **Campus Resources:**

### Health and Wellness

#### **U Matter, We Care:**

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

**Counseling and Wellness Center:** <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

#### **Sexual Discrimination, Harassment, Assault, or Violence**

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the [Office of Title IX Compliance](mailto:title-ix@ufl.edu), located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, [title-ix@ufl.edu](mailto:title-ix@ufl.edu)

#### **Sexual Assault Recovery Services (SARS)**

Student Health Care Center, 392-1161.

**University Police Department** at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

### Academic Resources

**E-learning technical support**, 352-392-4357 (select option 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu).  
<https://lss.at.ufl.edu/help.shtml>.

**Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

**Library Support**, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.  
<https://teachingcenter.ufl.edu/>.

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers.  
<https://writing.ufl.edu/writing-studio/>.

**Student Complaints Campus:** <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>;<https://care.dso.ufl.edu>.

**On-Line Students Complaints:** <http://www.distance.ufl.edu/student-complaint-process>.

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## **Course Outline:**

### **Course Topics**

The following topics will be covered in this course:

- User Experience Design and interaction design as a field and how it relates to Computer Science, Human-Centered Computing, and Human-Computer Interaction.
- Graphic Design for computer interfaces.
- User Experience Design techniques such as scenarios, personas, storyboards, wireframing, and information architecture.
- User Experience Design methods such as focus groups, design probes, affinity diagramming, and speed dating for UI concepts.
- Prototyping tools and techniques, both low-fidelity and high-fidelity.
- Design documentation
- Connecting with industry clients

### **Course Schedule**

A tentative schedule for the course is shown on the next page. The schedule is subject to change.

**CEN 4722 USER EXPERIENCE DESIGN**  
**WEEKLY SCHEDULE** (Subject to Change)

**KEY:**

Wk: Week

HW: Homework

◇ Project 1 (P1)

❖ Project 2 with industry client (P2)

Wk	Day/Date	Topics	Readings/ Video?	HW?	Project Deliverables
1	T 08/24	Course introduction, Syllabus overview, Industry clients introduction	No	No	None
	R 08/26	Intro to UXD	R1	HW1	None
2	T 08/31	History of UXD, Usability	R2	HW2	None
	R 09/02	User experience, Project 1 brief out	R3	HW3	None
3	T 09/07	The user-centered design process	R4	No	None
	R 09/09	Design critiques, User research	No	No	◇ Slides for P1 ideas
4	T 09/14	Data collection methods (interviews)	R5	HW4	None
	R 09/16	Conducting user interviews	No	No	None
5	T 09/21	Affinity diagramming	R6	No	None
	R 09/23	User needs, Personas, Scenarios, and Storyboards	R7	No	None
6	T 09/28	Interaction concepts	R8	No	None
	R 09/30	Interaction concepts	No	Yes (8)	None
7	T 10/05	P1 poster presentations	No	Yes (9)	◇ P1 poster
	R 10/07	Industry clients kick-off	No	No	None
8	T 10/12	P2 discussion	No	No	◇ P1 final design document
	R 10/14	Task flows and wireframing	No	No	None
9	T 10/19	Gestalt principles, Design licensing	No	No	None
	R 10/21	Project 2 consultation	No	No	None
10	T 10/26	Low-fidelity prototyping	No	No	None
	R 10/28	Paper prototyping user testing	No	No	❖ P2 affinity diagram
11	T 11/02	Project 2 consultation	No	No	❖ P2 user needs, personas, scenarios, Storyboard
	R 11/04	Dynamic prototyping	No	No	❖ P2 wireframes, mockups
12	T 11/09	Paper prototyping user testing for Project 2	No	No	❖ P2 paper prototype
	R 11/11	Veterans Day – No Class	No	No	None
13	T 11/16	Mid-point critique with clients	No	No	❖ All P2 materials so far
	R 11/18	Interactive prototype user testing	No	No	❖ P2 dynamic prototype
14	T 11/23	Project 2 consultation	No	No	None
	R 11/25	Thanksgiving – No Class	No	No	❖ P2 slides
15	T 11/30	Project 2 internal review	No	No	❖ All P2 materials
	R 12/02	❖ P2 final showcase	No	No	All P2 materials
16	T 12/07	End-of-semester test	No	No	None
	R 12/09	READING DAY			